Thus, in light of all the above analysis, EPA must promulgate binding PSD rules and regulations under CAA § 161, 42 U.S.C.A. § 7471 in the same manner that states are required to promulgate their implementing rules under their SIPs, i.e., as required by CAA § 307(d)(5) & (6). EPA cannot incrementally amend its promulgated rules and regulations through informal guidelines, policy statements, letters, and other interpretations made under CAA § 307(d)(1) and 5 U.S.C.A. § 553(b)(A) & (B). Therefore, the Department must look first to promulgated rules and regulations such as the rules and regulations adopted at 45 FR 52675 (August 7, 1980) in response to the Alabama Power decision in interpreting and applying its PSD rules, N.D. Admin. Code ch. 33-15-15, in general, and in interpreting the meaning of "baseline concentration" and how it is to be applied in calculating "increment consumption" in particular.

The Department, however, does not face the dilemma faced by the Appalachian Power court – (1) to treat the unpublished guidelines as if they were binding rules, or (2) to set the guidelines completely aside and declare them to be of no effect. In light of the recent United States Supreme Court decisions in Christensen and Mead summarized above, the Department has a third option – to treat un-promulgated interpretations and guidelines with "respect," but only to the extent that those interpretations have the "power to persuade." Christensen, 529 U.S. at 587; Mead Corp., 121 S. Ct. at 2175-76.

In summary, the Department will look to EPA's PSD rules, regulations, policy statements, and guidance as follows in interpreting the meaning and application of "baseline concentration" under N.D. Admin. Code ch. 33-15-15.

With regard to substantive rules and interpretive rules and regulations duly promulgated in the federal register after following CAA § 307(d)(5) & (6), the

Department will look to those rules with "Chevron deference" because that is the level of deference that will be given to those promulgated regulations in any dispute between EPA, the state, and/or industry in any action where the interpretation of those promulgated regulations is an issue in federal court. *See* Chevron, 467 U.S. at 845. An example of a duly promulgated PSD regulations are the rules and regulations promulgated at 45 FR 52675 (August 7, 1980) in response to the Alabama Power decision.

With regard to unpublished PSD interpretations and guidance that have not been duly promulgated in the federal register as required by CAA § 307(d)(5) & (6), the Department will look to those rules with Christensen-Mead deference – that is, the Department will follow them only to the extent persuasive – because that is the level of deference that will be given to those un-promulgated regulations in any dispute between EPA, the state, and/or industry in any action where the interpretation of those un-promulgated regulations is at issue in federal court. EPA's *Draft New Source Review Workshop Manual* (October 1990) is an example of an unpublished guidance document that should be given Christensen-Mead deference.

B. Establishing "Baseline Concentration" under the Relevant Federal PSD Statute and State and Federal Rules and Regulations

Under a Chevron deference analysis, the first step in defining and establishing a "baseline concentration" is to determine whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter

– for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. 437 U.S. at 436-37. In this case, Congress has defined "baseline concentration":

> The term "baseline concentration" means, with respect to a pollutant, the ambient concentration levels which exist at the time of the first application for a permit in an area subject to this part, based on air quality data available in the Environmental Protection Agency or a State air pollution control agency and on such monitoring data as the permit applicant is required to submit. Such ambient concentration levels shall take into account all projected emissions in, or which may affect, such area from any major emitting facility on which construction commenced prior to January 6, 1975, but which has not begun operation by the date of the baseline air quality concentration determination. Emissions of sulfur oxides and particulate matter from any major emitting facility on which construction commenced after January 6, 1975, shall not be included in the baseline and shall be counted against the maximum allowable increases in pollutant concentrations established under this part.

CAA § 169(4), 42 U.S.C.A. § 7479(4). Since Congress has directly spoken on the meaning of baseline concentration, the issue then is whether the intent of Congress is clear, and what discretion Congress intended to give to states in implementing the definition of "baseline concentration" and determining and applying the baseline concentration on a source by source basis. Placing this definition within the context of the CAA as a whole, the previous discussion has revealed that under the CAA Congress intended for states to have primary responsibility for air pollution prevention and air pollution control at its source, including the specific, source-by-source emission limitations. Train, 421 U.S. at 84-90. Consistent with the intent of the CAA, Alabama Power determined that the responsibility "for management of the consumption of allowable increments" is a state responsibility under the PSD statute, 636 F2d at 361, as are "growth-management decisions," Id. at 364. Further, the previous discussion has

revealed that the initial PSD regulations promulgated by EPA in 1974 were a child of litigation, as were the '77 amendments to the CAA passed by Congress which included the statutory definition of "baseline concentration" quoted above. The federal PSD rules and regulations were promulgated on August 7, 1980, at 45 FR 52675 in response to the dozens of separately filed actions that were consolidated and resulted in the Alabama Power decision. The promulgated substantive rules currently found at 40 CFR § 51.166 and 40 CFR § 52.21 are unchanged since promulgated in 1980 at 45 FR 52675, as are the promulgated interpretive rules explaining and interpreting baseline concentration and increment consumption in that regulation. For the reasons discussed in detail in the previous section of these findings, the Department can look primarily to those promulgated rules and interpretations in determining the meaning of its rule defining baseline concentration.

North Dakota's PSD rules define "baseline concentration" as follows:

> (1) "Baseline concentration" means that ambient concentration level which exists in the baseline area at the time of the applicable minor source baseline date. A baseline concentration is determined for each contaminant for which a minor source baseline date is established and includes:
>
> > (a) The actual emissions representative of sources in existence on the applicable minor source baseline date, except as provided in paragraph 2;
> > (b) The allowable emissions of major stationary sources which commenced construction before the major source baseline date but were not in operation by the applicable minor source baseline date.
>
> (2) The following will not be included in the baseline concentration and will affect the applicable maximum allowable increases:
>
> > (a) Actual emissions from any major stationary source on which construction commenced after the major source

baseline date; and
(b) Actual emissions increases and decreases at any stationary source occurring after the minor source baseline date.

N.D. Admin. Code § 33-15-15-01(1)(d). The definition of "baseline concentration" at 40 CFR § 51.166(b)(13) and 40 CFR § 52.21(b)(13) is identical to the definition at § 33-15-15-01(1)(d), and has remained unchanged since promulgated at 45 FR at 52731 & 52737 in 1980. The promulgated interpretive rule explaining the current "baseline concentration" definition was also a part of the '80 regulations and has also remained unchanged since that date. It provides:

> As proposed, EPA is continuing its current definition of baseline concentration as the ambient concentration levels at the time of the first permit application in an area subject to PSD requirements. Baseline concentration generally includes actual source emissions from existing sources but excludes emissions from major sources commencing construction after January 6, 1975. Actual source emissions are generally estimated from source records and any other information reflecting actual source operation over the two-year time period preceding the baseline date. The baseline concentration also includes projected emissions from major sources commencing construction (including modification) before January 6, 1975, but not in operation by August 7, 1977.
>
> Unlike the June 1978 policy, baseline concentration will no longer routinely include those emissions increases after the baseline date from sources contributing to the baseline concentration, which are due to increased hours of operation or capacity utilization. Existing policy permitted this grandfathering, provided that such increases were allowed under the SIP and reasonably anticipated to occur as of the baseline date. Today's policy which normally excludes such increases is consistent with using actual source emissions to calculate baseline concentrations. An actual emissions policy, however, does allow air quality impacts due to production rate increases to sometimes be considered as part of the baseline concentration. If a source can demonstrate that its operation after the baseline date is more representative of normal source operation than its operation preceding the baseline date, the definition of actual emissions allows the reviewing authority to use the more representative period to calculate the source's actual emissions contribution to the baseline concentration. EPA thus believes that sufficient flexibility exists

> within the definition of actual emissions to allow any reasonably anticipated increases or decreases genuinely reflecting normal source operation to be included in the baseline concentration.

45 FR at 52714, col. 2-3. (Emphasis supplied.)

The operative language in CAA § 169(4), 42 U.S.C.A. § 7479(4), is the language that requires the baseline concentration to be "based on air quality data available." The statute does not define "air quality data" or "available", but the term and the concept of "air quality data" what data is "available" and useable is discussed in detail in EPA's '74 regulations that were the basis of most of the '77 CAA amendments, and that were under appeal when Congress passed those '77 PSD amendments. 39 FR 31000 (August 27, 1974). *See* above discussion at pp. 25-44. The '74 regulations defined "baseline concentration," and each subsequent set of PSD regulations promulgated by EPA between '74 and the final '80 PSD regulations also defined "baseline concentration" but altered it is some way. The Department has reviewed all of these regulations, as well as the final definition of "baseline concentration" as defined and interpreted in the ultimate substantive rule and interpretive rule quoted above. The Department finds that the meaning of "air quality data" or "available" is not clear from the statute itself, and that the definition of "baseline concentration" in the promulgated substantive rule at 45 FR at 52731 & 52737 as interpreted in the interpretive rule at 45 FR at 52714, col. 2-3, quoted above, is a reasonable interpretation and application of the statutory language that would be given Chevron deference if reviewed by a federal court, and which, therefore, also must be given Chevron deference by the Department. The Department may therefore look to the promulgated substantive rules defining "baseline concentration" in the '80 regulations and the promulgated interpretive rule

quoted above in applying and interpreting its rule. North Dakota's PSD rule defining "baseline concentration" quoted above is identical to the definitions in the substantive rules defining "baseline concentration" at 45 FR at 52731 & 52737.

The operative language in N.D. Admin. Code § 33-15-15-01(1)(d) for determining baseline concentration is the requirement in subdivision (a) that the baseline concentration include "[t]he actual emissions representative of sources in existence on the applicable minor source baseline date" (emphasis supplied). Each of the emphasized words in the operative language requires the Department to make factual and policy determinations first in establishing the baseline concentration, then in applying the baseline concentration in its increment expansion and increment consumption calculations in managing the increment under the authority granted to the state in the CAA, and recognized in Train and Alabama Power. The purpose of the "baseline concentration" hearing to be conducted by the Department is to allow evidence and public comment on which data should be used by the Department to establish "[t]he actual emissions representative of sources in existence on the applicable minor source baseline date."

The first issue that the Department must address at the hearing is to identify the "sources," both major and minor, that were "in existence" as of the minor source baseline date that affected the "ambient concentration levels" of SO2 in North Dakota's Class I areas at that time. The language of the rule requires that the Department determine the "actual emissions representative of sources in existence on the applicable minor source baseline date." N.D. Admin. Code § 33-15-15-01(1)(d)(1)(a). The "baseline concentration" is not limited just to major stationary sources, but also

includes minor sources such as the oil and gas wells. However, since the areas of concern for potential violations are only the Class I areas in western North Dakota, the Department has to consider only those sources that affected "the ambient concentration levels" of SO2 (CAA § 169(4), 42 U.S.C.A. § 7479(4)) in these Class I areas as of the minor source baseline date.

The second issue the Department must address at the hearing is what "air quality data" (CAA § 169(4), 42 U.S.C.A. § 7479(4)) are "representative" of sources in existence on the applicable minor source baseline date. The interpretive rule quoted above defines this process. To address this issue, the Department must first determine the "[a]ctual source emissions" as "estimated from source records and any other information reflecting actual source operation over the two-year time period preceding the baseline date." 45 FR at 52714 at col. 2-3. The Department must then determine whether this calculation is "representative" of "normal source operation." "If a source can demonstrate that its operation after the baseline date is more representative of normal source operation than its operation preceding the baseline date," then "the definition of actual emissions" allows the Department "to use the more representative period to calculate the source's actual emissions contribution to the baseline concentration." Id. (Emphasis supplied.)

As noted earlier, the rules and regulations EPA issued in response to the Alabama Power decision identified the two basic issues that must be addressed to calculate increment consumption:

> There are two basic issues in the area of increment consumption: (1) which source emissions consume increment and (2) how to calculate the

> amount of increment consumed by those emissions. The Alabama Power decision addressed neither question.

45 FR at 52717. To answer the first of these two basic issues – which source emissions consume increment – requires that a "baseline concentration" be determined for sources in existence as of the minor source baseline date. Establishing the baseline concentration for each source allows the Department to identify which source emissions consume increment because they are not a part of the baseline concentration, and which source emissions do not consume increment because they are a part of the baseline concentration. Further, it allows the Department to calculate any increment expansion that has occurred because either (1) a source in existence as of the minor source baseline date is no longer in existence, or (2) is emitting SO2 at a lower rate than its "baseline concentration." Once the "baseline concentration" is established and increment expansion or consumption has been determined for each baseline source, then the Department can move on to the second issue identified by the EPA: how to calculate the amount of increment consumed by non-baseline or increment consuming emissions.

In summary, there are two basic issues the Department must address to establish a baseline concentration for each source in existence as of the minor source baseline date. First, the Department must identify the "sources," both major and minor, that were "in existence" as of the minor source baseline date that affected the "ambient concentration levels" of SO2 in North Dakota's Class I areas at that time. Second, the Department must determine what data are "representative" of those sources. To determine what data are "representative" of those sources, the Department should give

Chevron deference to EPA's '80 regulations which contain a two part process for determining the baseline concentration for relevant sources. The Department must first determine the "[a]ctual source emissions" as "estimated from source records and any other information reflecting actual source operation over the two-year time period preceding the baseline date." 45 FR at 52714 at col. 2-3. The Department must then determine whether this calculation is "representative" of "normal source operation." If a source can demonstrate that its operation after the baseline date is more representative of normal source operation than its operation preceding the baseline date, then "the definition of actual emissions" allows the Department "to use the more representative period to calculate the source's actual emissions contribution to the baseline concentration." Id.

1. History of term "Baseline Concentration"

In the previous section, the Department determined after reviewing the regulations that preceded the '80 PSD regulations that are still effective, and after reviewing the final definition of "baseline concentration" in the '80 regulations, that the meaning of "air quality data" or "available" is not clear in the underlying statute itself, and that the definition of "baseline concentration" in the promulgated substantive rule at 45 FR at 52731 & 52737 as interpreted in the interpretive rule at 45 FR at 52714, col. 2-3, was a reasonable interpretation and application of the statutory language that would be given Chevron deference if reviewed by a federal court, and which, therefore, also must be given Chevron deference by the Department. The Department looked to the promulgated substantive rules defining "baseline concentration" in the '80 regulations and the promulgated interpretive rule, and determined that there are two basic issues

the Department must address in a baseline hearing to establish a baseline concentration for each source in existence as of the minor source baseline date. The regulations, however, do not define the key terms – "representative" and "normal source operation." This section will examine the legislative and administrative history that gave rise to these terms – "representative" and "normal source operation" – in the context of the pre-'80 regulations.

Pages 25-44 of these findings discuss in detail the legislative history of the PSD statute, CAA §§ 160-169, 42 U.S.C.A. §§ 7470-7479. The PSD program arose out of the potential flight of industry out of NAAQS nonattainment areas, and an attempt to prevent air quality in attainment areas from deteriorating to the maximum level of air pollution that would be allowed under the NAAQS – a potential for deterioration that was termed at that time the "graying of America." *See* pages 32-35 above. The PSD program was initiated when the court in Sierra Club held that the language of CAA § 101(b)(1), declaring the legislative purpose of "protecting and enhancing" air quality, mandated that the EPA require states to ensure that the air quality of attainment areas not suffer "significant deterioration." 344 F. Supp. at 256.

The EPA published several sets of regulations in response to the mandate of the Sierra Club court. In response to a preliminary injunction issued in Sierra Club, on November 9, 1972 (37 FR 10842) all state implementation plans were disapproved insofar as they failed to provide a plan for prevention of significant deterioration. On July 16, 1973 (38 FR 18986), an initial notice of proposed rulemaking was published which set forth four alternative plans for PSD and solicited public comment on which alternative to choose. On August 27, 1974 (39 FR 31000), EPA issued proposed

regulations for PSD based on comments on the alternatives set forth in '73. These August '74 regulations set forth all of the basic elements of the PSD program, and these elements have remained essentially unchanged since their inception. Congress did alter certain details of the '74 regulations, but the basic concepts and elements of the PSD program have remained unaltered since the '74 regulations were promulgated. *Compare* rules at 39 FR at 31007-09 to CAA §§ 160-169, 42 U.S.C.A. §§ 7470-7479, and to final rules implemented after Alabama Power at 45 FR at 52729. In fact, the Class I SO2 increments for the annual, 24-hour, and 3-hour periods have remained unchanged from their initial establishment in the August '74 regulations and were adopted by Congress in the '77 amendments to the CAA. *See* 39 FR at 31007, col. 2, and CAA § 163(b)(1), 42 U.S.C.A. § 7473(b)(1). Therefore, to comply with the "cardinal rule" of statutory construction that the "interpretation must be consistent with legislative intent and done in a manner which will accomplish the policy goals and objectives of the statutes," it is necessary to examine the policy goals and objectives of the PSD law as set forth in the original August '74 regulations. *See* Holum, 544 N.W.2d at 152-53; N.D.C.C. § 1-02-01.

The '74 regulations understood that the PSD program "might have a major influence on land use patterns in many areas of the country." 39 FR at 31001, col. 1. "Comprehensive land use planning is a complex process including many variables, only one of which is air quality." Id. Development of land use plans in which air quality represents "a single overriding criterion" was not, in EPA's judgment, "a desirable course of action for most areas." Id. The '74 regulations were "therefore designed to inject consideration of air quality as one of many constraints on land use decisions, but

not to mandate land use decisions based solely on air quality." Id. The '74 regulations defined the "significance" of any air quality deterioration "in terms of the proper and desired use of an area as well as the magnitude of pollutant concentrations." Id. The "intent" of the PSD regulations was not "*to restrict or prohibit economic growth, but rather to ensure that desirable growth is planned and managed in a manner which will minimize adverse impacts on the environment.*" Id. at col. 1-2 (italics provided).

Both the '73 and August '74 regulations determined:

> [The] level of deterioration which constitutes "significant" deterioration *is basically a subjective decision*, because the primary and secondary National Air Quality Standards are required to be protective of all known adverse effects on health and welfare on a nation-wide context.

Id. at col. 2 (italics provided). Responses EPA received to its proposed '73 rulemaking "confirmed that consideration of varying social, economic, and environmental factors in different areas would result in varying definitions of what constitutes significant deterioration." Id. After reviewing the scientific evidence and all the public comments, the EPA concluded that none of the information reviewed would enable the EPA to justify anything "but a subjective method" for defining when increases in concentration of pollutants become "significant." Id.

As discussed in detail at pages 12-21 of these findings, the August '74 regulations recognize that the "Clean Air Act places primary responsibility for the prevention and control of air pollution on the States and local governments. " 39 FR at 31001, col.2. The EPA noted that "[s]trong sentiment" was expressed at the hearings, in written comments, and during consultations that States and localities should be given the maximum degree of flexibility in making judgments as to when increases in

concentration are "significant," because the judgments must be based on "considerations that vary from locality to locality." Id. EPA explained its rationale for giving primacy over the PSD program to states and localities:

> Stemming from concern over the impact of regulations to prevent significant deterioration on land use patterns, and the necessarily subjective nature of any determinations in this regard, the roles of Federal, State, and local governments are very important. Any policy to prevent significant deterioration involves difficult questions regarding how the land in any area is to be used. *Traditionally, these land use decisions have been considered the prerogative of local and State governments, and in the regulations promulgated herein, the primary opportunity for making these decisions is reserved for the States and local governments.* The States, acting pursuant to federal regulations, would exercise the authority to prevent significant deterioration of air quality, and this authority could be delegated to the local level if desired. In the Administrator's judgment, this matter normally should not be handled at the Federal level, but should become a matter for discussion and decision making at a governmental level in close contact with the area.

Id. (Italics provided.)

The EPA, however, may enforce the PSD regulations "if States are unwilling to accept ... delegation of authority." Id. Further, even in cases where states fully accept delegated authority, the EPA may review, "within very narrow limits," state decisions made under PSD delegation. Id.

Originally, the PSD regulations borrowed language from zoning law, but the August '74 regulations changed the PSD terminology from "zoning" to "classification" to "avoid confusion with conventional zoning concepts." 39 FR at 31004, col. 1. EPA explained that under conventional zoning practices, "a zone is a relatively small area" such as a city block. Id. The areas classified under the PSD regulations, however, would of necessity have to be much larger, "often consisting of, at a minimum, several large counties." Id. "Initial classification of smaller individual areas does not appear

feasible because the carryover of pollution from one small area to another cannot be adequately controlled." Id.

The EPA explained the three classes of areas that were being established for "clean air" or NAAQS attainment regions like North Dakota and their function:

> A Class I designation would involve those areas where almost no change from current air quality patterns is desired. Class II designation would indicate areas where moderate change is desirable but where stringent air quality constraints are nevertheless desired. Class III designation would indicate areas where major industrial or other growth is desired and where increases up to the national standards [NAAQS] would be insignificant. *The basic purpose of this classification procedure would be to require a conscious decision, made publicly with public input, that the intention of the State and the desire of the local population is to provide for the type of air quality implied by the classification.*

Id. at col. 1-2 (Italics supplied).

Under the August '74 regulations, all NAAQS attainment areas in the United States were classified as Class II areas. 39 FR at 31007, col. 2, § 52.21(c)(3)(i). There were no areas initially designated Class I such as National Parks. Id. Any redesignation by the state of an area from Class II was subject to the approval of the EPA Administrator. 39 FR at 31007, col. 3, § 52.21(c)(3)(ii). For lands owned by the federal government, "other than lands of exclusive federal jurisdiction," such as the federal grassland areas in western North Dakota, the states were given primary authority for redesignation subject to agreement by the Federal Land Manager (FLM). Id. at § 52.21(c)(3)(iii). The FLM could also ask the state to redesignate a federal area. Id. at § 52.21(c)(3)(iv). If the state and the FLM could not reach agreement on the redesignation of the federal land, "the Executive Office of the President will designate a classification for the area." Id. at § 52.21(c)(3)(v). For lands of "exclusive federal

legislative jurisdiction" such as National Parks, the FLM had the authority to redesignate an area from its initial Class II designation "after consultation with the affected State(s)." Id. at § 52.21(c)(3)(vi). All of these provisions in the August '74 regulations dealing with authority over federally owned and controlled lands were later revised by the EPA and remained in dispute until resolved by Congress in the '77 CAA amendments.

The August '74 regulations established the increments for SO2 for Class I areas at exactly the level adopted by Congress in '77 and where they remain to the present – 2 micrograms per cubic meter for annual "mean," 5 micrograms per cubic meter for 24-hour maximum, and 25 micrograms per cubic meter for 3-hour maximum. *Compare* 39 FR at 31007, col. 2 and CAA 163(b)(1), 42 U.S.C.A. § 7473(b)(1). The August '74 regulations established the Class II increments at approximately the level where Congress would set the Class III increments. *Compare* 39 FR at 31007, col. 2 and CAA § 163(b)(3), 42 U.S.C.A. § 7473(b)(3). The August '74 regulations would have allowed attainment areas redesignated as Class III to deteriorate in air quality up to the levels of pollution allowed by the NAAQS, a level of deterioration Congress found unacceptable in the '77 amendments except for areas already close to violating the NAAQS, which areas can allow their air quality to deteriorate up to the NAAQS without exceeding them. *Compare* 39 FR at 31007, col. 2, § 52.21(c)(2)(ii) and CAA § 163(b)(3), 42 U.S.C.A. § 7473(b)(3).

The '74 regulations explain the purpose of the relatively low Class I increments as follows:

> Areas should be considered for redesignation as Class I in cases where the location of any polluting industry *within the area* is inconsistent with current or planned uses for the area, or where it is

> desirable to protect the area from any further deterioration because it is one of exceptional scenic or recreational value or is ecologically fragile, or where no further major industrial growth is desired irrespective of the existing air quality.

39 FR at 31004, col. 2-3 (italics provided). When Congress designated national wilderness areas which exceed 5000 acres in size and national parks which exceed 6000 acres in size as Class I areas in 1977, it mitigated the harshness of this result for potential economic growth in the region by setting up a variance procedure which allowed deterioration of air quality approximately up to the level allowed in Class II areas caused by facilities granted variances with the concurrence of the FLM (hereafter referred to as a "FLM" variance"). *Compare* CAA § 162(a), 42 U.S.C.A. § 7472(a) and CAA § 165(d)(2)(C)(iv), 42 U.S.C.A. § 7475(d)(2)(C)(iv). In the case where the FLM does not initially concur with the variance, but the variance is later granted either by the Governor or the President, Congress set the increment for facilities granted those variances at a level between the Class II increment and the Class I increment, but allowed for violation of the 3-hour and 24-hour increment for up to 18 days in any annual period. CAA § 165(d)(2)(D), 42 U.S.C.A. § 7475(d)(2)(D).

However in mitigating the harshness of the Class I designation on economic development through the variance procedure, Congress also altered the requirement under the '74 regulations that "the location of any polluting industry" be "*within the area*" that is designated Class I. 39 FR at 31004, col. 2-3 (italics provided). Since it was unlikely that any major stationary source would ever attempt to locate within the confines of a national park or wilderness area, so limiting the application of the Class I designation only to "within the area" designated would have made it almost useless.

Congress solved the potential problem of applying the increments only to facilities located *within* an area designated as Class I by requiring review and concurrence by the FLM whenever "lands *within* a class I area *may be affected* by emissions from the proposed facility." CAA § 165(d)(2)(A), 42 U.S.C.A. § 7475(d)(2)(A) (Italics supplied.). Congress provided for this review by the FLM, however, only within the context of the "permit application" process. Id. Congress was silent about the application of the "*may be affected*" standard to "baseline concentration" facilities located outside of the Class I areas already in existence when the PSD law went into effect, or outside of the permit review process. It is an unresolved issue whether the "may be affected" standard applies to those facilities if they have not triggered the requirement of permit review through a "major modification." *See* N.D. Admin. Code § 33-15-15-01(1)(x) (defining "major modification.")

The August '74 regulations define "baseline air quality concentration" as follows:

> The phrase "baseline air quality concentration" refers to both sulfur dioxide and particulate matter and means the sum of the ambient concentration levels existing during 1973, those future concentrations estimated to result from sources granted approval for construction or expansion but not yet operating prior to the effective date of this paragraph, and all other concentration increases estimated to result from new sources operating between January 1, 1974, and the effective date of this paragraph. These concentrations can be measured or estimated where appropriate for the area of impact and for all time periods covered by the defined increments. In the case of the maximum three-hour and twenty-four hour concentrations, only the second highest concentrations should be considered.

39 FR at 31007, col. 1, § 52.21(b)(1).

The August '74 regulations also explain why EPA decided it was necessary to use computer modeling rather than actual air quality monitoring data to calculate and

determine increment expansion and consumption. The accuracy of the monitoring methods and data available at that time "was not adequate to reliably distinguish between readings approaching the small increments proposed." 39 FR at 31003, col. 1. The major conclusion that could be drawn from the air quality monitoring data was that "vast numbers of measurements would be required to precisely determine a baseline level, and then further extensive measurements would be required to establish the degree of deterioration from that level." Id. Further, "[n]ormal random variations in pollutant concentration in clean areas, especially for particulate matter, are often of greater magnitude than the incremental increases proposed" in the original PSD plan. Id. at col. 2. Using the example of the Grand Canyon in 1968 and 1969, EPA noted that the maximum concentration in 1968 for particulate was 126 micrograms per cubic meter and 32 micrograms per cubic meter was the annual average for that year. In 1969, the maximum concentration for particulate was 32 micrograms per cubic meter (i.e., the previous year's average), and the annual average in 1969 at the Grand Canyon was 17 micrograms per cubic meter. Id. EPA noted that "[t]hese differences were caused by random variations due primarily to normal meteorological factors, and exceed the allowable air quality increments proposed." Id. Because of these random natural variations, EPA concluded that a measured or monitored incremental increase over a measured or monitored baseline "normally cannot be used as the criterion in assessing the significance of a new facility's impact on air quality." Id. Therefore, EPA concluded that computer models were the best option available for measuring increment consumption:

> [D]ata obtained from current diffusion modeling techniques, while not corresponding to actual conditions in the ambient air, do provide a consistent and reproducible guide which can be used in comparing the relative impact of a source.

Id.

> [C]urrent air quality measurements ... show large random variations, and it is unclear how a measured baseline could be meaningful in view of these large random variations in background concentrations.
>
> In actual practice, although the regulations do not specifically preclude the use of measured air quality as a method for assessing the available increment, it is anticipated that assessment of the available increment will normally be accomplished through an accounting procedure whereby modeling results for individual sources will be used to keep track of the available (or "unused") increment as sources or emissions are increased or decreased. Therefore, an accurately measured baseline [i.e., a baseline established by monitoring] is not an essential consideration in implementing these regulations although the concept is retained for use in those few situations where it may be desired.

39 FR at 31005, col. 1 (language in brackets added for clarification).

On December 5, 1974, EPA published proposed amendments to its August, '74 regulations. *See* 39 FR 42510 (December 5, 1974). These amendments streamlined the definition of "baseline air quality concentration" by changing the operative dates, by tying it in with new source review approved in each SIP, and by clarifying that the baseline concentration can be either measured by monitoring or estimated by computer models:

> The phrase "baseline air quality concentration" refers to both sulfur dioxide and particulate matter and means the sum of ambient concentration levels existing during 1974 and those additional concentrations estimated to result from sources granted approval (pursuant to approved new source review procedures in the plan) for construction or modification but not yet operating prior to January 1, 1975. These concentrations shall be established for all time periods covered by the increments [i.e., annual, 24-hour, and 3-hour] ... and may be measured or estimated. In the case of